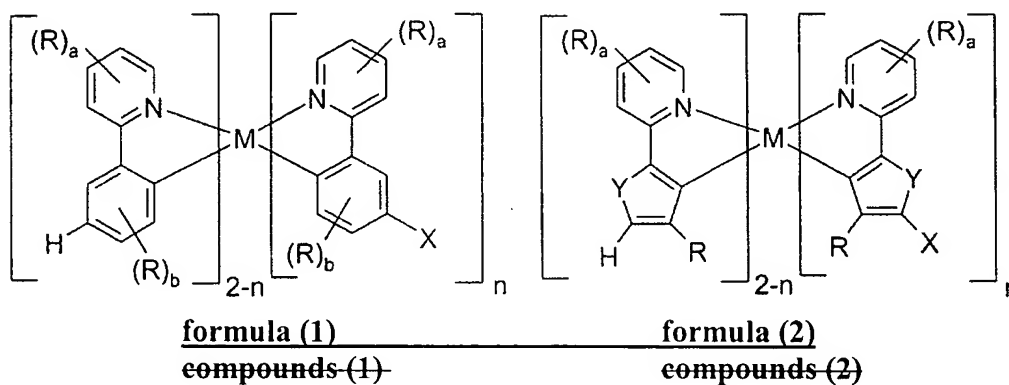


AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound of the formula (1) and (2)



where the symbols and indices are each defined as follows:

M is Pd, Pt;

M is Pd or Pt;

X is Cl, Br, I;

X is Cl, Br or I;

Y is O, S, Se, NR¹;

Y is O, S, Se or NR¹;

R is the same or different at each instance and is H, F, Cl, Br, I, NO₂, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH₂ groups may be replaced by -O-, -SiR¹₂-, -S-, -NR¹- or -CONR¹- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl

group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

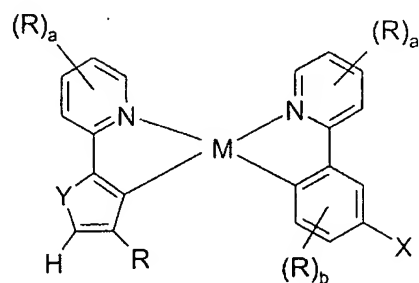
R^1 are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

a is 0, 1, 2, 3 or 4;

b is 0, 1, 2 or 3; and

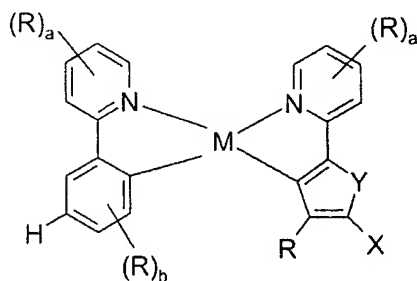
n is 1 or 2.

2. (Currently amended) A compound of the formula (1a) and (2a)



formula (1a)

~~compounds (1a)~~



formula (2a)

~~compounds (2a)~~

where the symbols and indices are each defined as follows:

M — is Pd, Pt;

M is Pd or Pt;

X — is Cl, Br, I;

X is Cl, Br or I;

Y is O, S, Se, NR^+ ;

Y^1 is O, S, Se or NR^1 ;

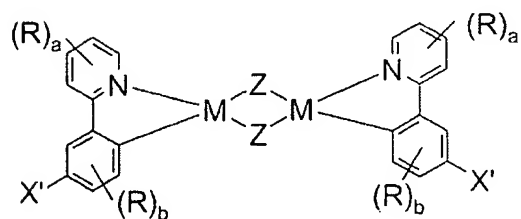
R is the same or different at each instance and is H, F, Cl, Br, I, NO_2 , CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH_2 groups may be replaced by $-\text{O}-$, $-\text{SiR}^1_2-$, $-\text{S}-$, $-\text{NR}^1-$ or $-\text{CONR}^1-$ and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R^1 are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

a is 0, 1, 2, 3 or 4;

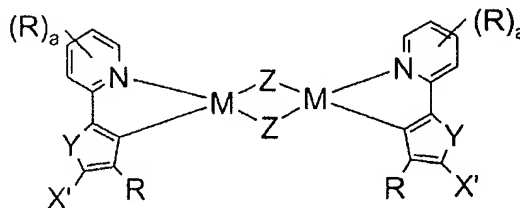
b is 0, 1, 2 or 3.

3. (Currently amended) A compound of the formula (3) and (4)



formula (3)

compounds (3)



formula (4)

compounds (4)

where the symbols and indices are each defined as follows:

M is Pd, Pt;

M is Pd or Pt;

X' is H, Cl, Br or I, with the proviso that at least one X' per formula is selected from Cl, Br or I;

~~Y~~ is O, S, Se, NR^+ ;

Y is O, S, Se or NR^1 ;

~~Z~~ is identically F, Cl, Br, I, O-R^+ , S-R^+ , $\text{N(R}^+)_2$

Z is identically F, Cl, Br, I, O-R^1 , S-R^1 or $\text{N(R}^1)_2$.

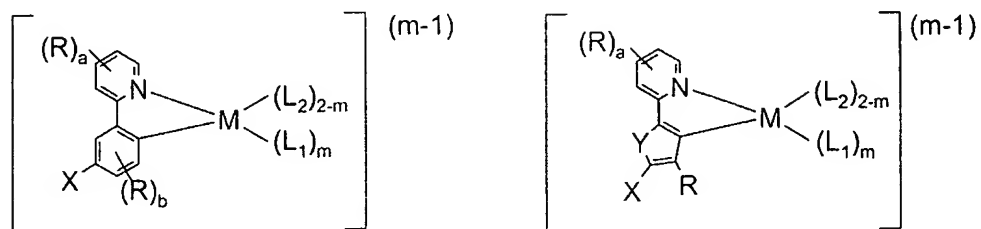
R is the same or different at each instance and is H, F, Cl, Br, I, NO_2 , CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH_2 groups may be replaced by -O-, $-\text{SiR}^1_2-$, -S-, $-\text{NR}^1-$ or $-\text{CONR}^1-$ and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R^1 are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

a is 0, 1, 2, 3 or 4; and

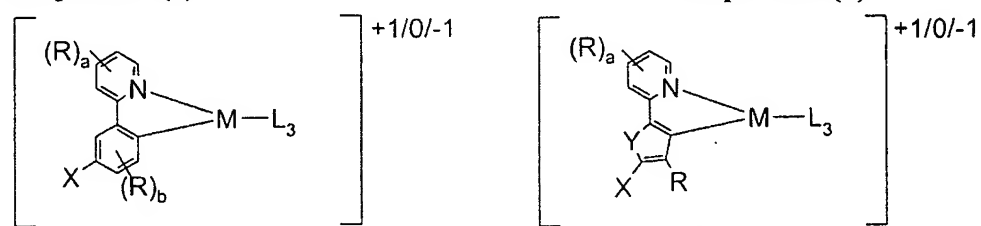
b is 0, 1, 2 or 3.

4. (Currently amended) A compound of the formula (5), (6), (7) and (8),



compounds (5)

compounds (6)



compounds (7) **compounds (8)**

where the symbols and indices are each defined as follows:

M is Pd, Pt;

M is Pd or Pt;

X is Cl, Br, I;

X is Cl, Br or I;

Y is O, S, Se, NR⁺;

Y is O, S, Se or NR¹;

R is the same or different at each instance and is H, F, Cl, Br, I, NO₂, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH₂ groups may be replaced by -O-, -SiR¹₂-, -S-, -NR¹- or -CONR¹-

and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R¹ are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

L₁ is an uncharged, monodentate ligand;

L₂ is a monoanionic, monodentate ligand;

L₃ is an uncharged or mono- or dianionic bidentate ligand;

a is 0, 1, 2, 3 or 4;

b is 0, 1, 2 or 3; and

m is 0, 1 or 2.

5. (Currently amended) A compound as claimed in claim 4, characterized in that L₁ is carbon monoxide, an isonitrile, ~~for example, in particular, tert-butylisonitrile, cyclohexylisonitrile, adamantylisonitrile,~~ an amine, ~~in particular, for example, trimethylamine, triethylamine,~~ morpholine, phosphine, phosphines, ~~for example trifluorophosphine, or else~~ aliphatic, aromatic or heteroaromatic phosphines, phosphate, arsine, stibine, ~~in particular trimethylphosphine, tricyclohexylphosphine, dicyclohexylphenylphosphine, tri-o-tolylphosphine, tri-tert-butylphosphine, triphenylphosphine, tris(pentafluorophenyl)phosphine or trifluorophosphine, phosphites, in particular, for example, trimethyl phosphite, triethyl phosphite, arsines, in particular, for example, trifluoroarsine, trimethylarsine, tricyclohexylarsine, tri-tert-butylarsine, triphenylarsine, tris(pentafluorophenyl)arsine, stibines, in particular, for example, trifluorostibine, trimethylstibine, tricyclohexylstibine, tri-tert-butylstibine, triphenylstibine, tris(pentafluorophenyl)stibine or a nitrogen-containing heterocycle, in particular pyridine, pyridazine, pyrazine, triazine.~~

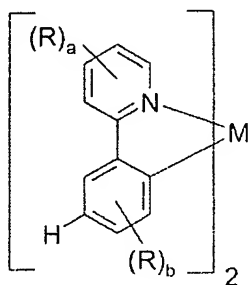
6. (Currently amended) A compound as claimed in claim 4, characterized in that L₂ is a

halide, in particular F, Cl, Br, I, or cyanide, cyanate, isocyanate, thiocyanate, isothiocyanate, an alkoxide, in particular, for example, methoxide, ethoxide, propoxide, isopropoxide, tert-butoxide, phenoxide, a thioalkoxide, in particular, for example, methanethiolate, ethanethiolate, propane-thiolate, isopropanethiolate, tert-thiobutoxide, thiophenoxide, an amide, in particular, for example, dimethylamide, diethylamide, diisopropylamide, a carboxylate, in particular, for example, acetate, trifluoroacetate, propionate, benzoate, or an anionic nitrogen-containing heterocycle, in particular morpholide, pyrrolide, imidazolide, pyrazolide.

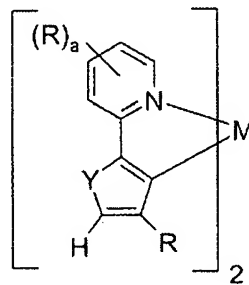
7. (Currently amended) A compound as claimed in claim 4, characterized in that L₃ is a diamine, in particular, for example, ethylenediamine, N,N,N',N'-tetramethylethylenediamine, propylenediamine, N,N,N',N'-tetramethylpropylenediamine, cis-, trans-diaminocyclohexane, cis-, trans-N,N,N',N'-tetramethyldiaminocyclohexane, imine, diimine, diphosphine, imines, in particular, for example, 2[(1-(phenylimino)ethyl]pyridine, 2[(1-(2-methylphenylimino)ethyl]pyridine, 2[(1-(2,6-diisopropylphenylimino)ethyl]pyridine, 2[(1-methylimino)ethyl]pyridine, 2[(1-(ethylimino)ethyl]pyridine, 2[(1-(isopropylimino)ethyl]pyridine, 2[(1-(tert-butylimino)ethyl]pyridine, diimines, in particular, for example, 1,2-bis(methylimino)ethane, 1,2-bis(ethylimino)ethane, 1,2-bis(isopropylimino)ethane, 1,2-bis(tert-butylimino)ethane, 2,3-bis(methylimino)butane, 2,3-bis(ethylimino)butane, 2,3-bis(isopropylimino)butane, 2,3-bis(tert-butylimino)butane, 1,2-bis(phenylimino)ethane, 1,2-bis(2-methylphenylimino)ethane, 1,2-bis(2,6-diisopropylphenylimino)ethane, 1,2-bis(2,6-di-tert-butylphenylimino)ethane, 2,3-bis(phenylimino)butane, 2,3-bis(2-methylphenylimino)butane, 2,3-bis(2,6-diisopropylphenylimino)butane, 2,3-bis(2,6-di-tert-butylphenylimino)butane, heterocycles containing two nitrogen atoms, in particular, for example, 2,2'-bipyridine, o-phenanthroline, diphosphines, in particular, for example, bis-diphenylphosphinomethane, bisdiphenylphosphinoethane, bis(diphenylphosphino)propane, bis(dimethylphosphino)methane, bis(dimethylphosphino)ethane, bis(dimethylphosphino)propane, bis(diethylphosphino)methane, bis(diethylphosphino)ethane, bis(diethylphosphino)propane, bis(di-tert-butylphosphino)methane, bis(di-tert-butylphosphino)ethane, bis(tert-butylphosphino)propane, 1,3-diketonates derived from 1,3-diketones, in particular, for example, acetylacetone, benzoylacetone, 1,5-diphenylacetylacetone, dibenzoylmethane, bis(1,1,1-trifluoroacetyl)methane, 3-ketonates derived from 3-keto esters, in particular, for example, ethyl acetoacetate, carboxylates derived from aminocarboxylic

acids, in particular, for example, pyridine 2-carboxylic acid, quinoline 2-carboxylic acid, glycine, dimethylglycine, alanine, dimethylaminoalanine, salicylimines derived from salicylimines, in particular, for example, methylsalicylimine, ethylsalicylimine, phenylsalicylimine, dialkoxides derived from dialcohols, in particular, for example, ethylene glycol, 1,3-propylene glycol, dithiolates derived from dithiols, in particular, for example, 1,2-ethylenedithiol, 1,3-propylenedithiol, heteroarylborate, in particular, for example, tetrakis(1-imidazolyl)borate, tetrakis(1-pyrazolyl)borate.

8. (Original) A process for preparing the compounds defined in claim 1, by reacting the compounds (9) or (10)



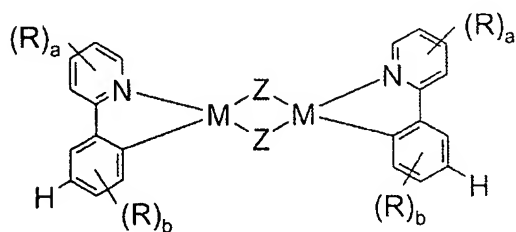
compounds (9)



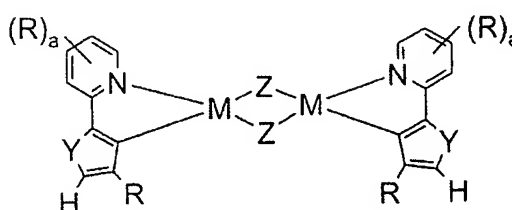
compounds (10)

in which M and the radicals and indices Y, R, R¹, a and b are each as defined in claim 1 with halogenating agents and subsequently reducing them.

9. (Original) A process for preparing the compounds defined in claim 3, by reacting the compounds (11) or (12)



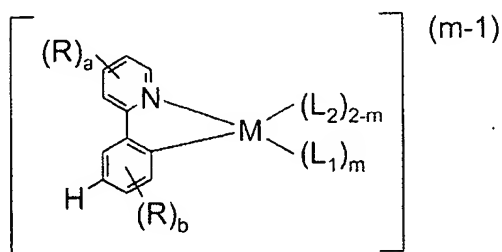
compounds (11)



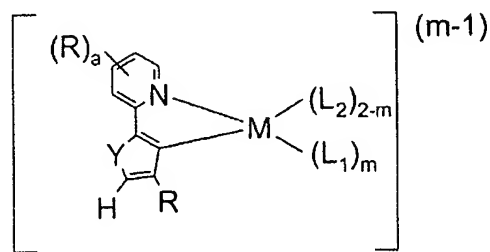
compounds (12)

in which M and the radicals and indices Z, Y, R, R¹, a and b are each as defined in claim 3 with halogenating agents and subsequently reducing them.

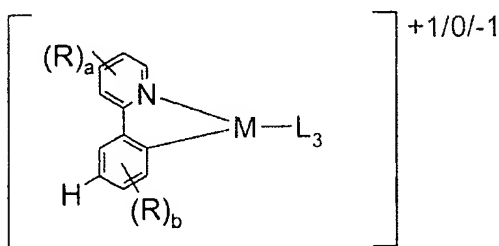
10. (Currently amended) A process for preparing the compounds defined in claim 4, by reacting the compounds (13), (14), (15) or (16),



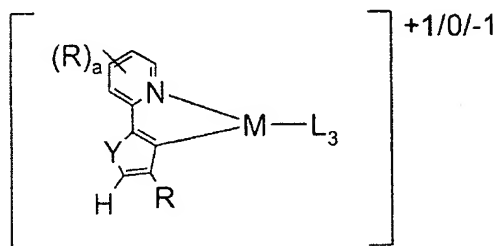
compounds (13)



compounds (14)



compounds (15)



compounds (16)

in which M and the radicals and indices L₁, L₂, L₃, Y, R, R¹, a, b and m are each as defined above in claim 4, with halogenating agents and subsequently reducing them.

11. (Currently amended) The process as claimed in claim 8, ~~one or more of claims 8 to 10~~, characterized in that the halogenating agent used is a halogen X₂ or an interhalogen X-X and a base in a molar ratio of from 1:1 to 1:100, or an organic bromine complex such as pyridinium perbromide, and in each case optionally a Lewis acid in a molar ratio (halogen to Lewis acid) of from 1:0.1 to 1:0.0001.

12. (Currently amended) The process as claimed in claim 8, ~~one or more of claims 8 to 10~~, characterized in that the halogenating agent used is an organic N-Hal compound.

13. (Currently amended) The process as claimed in claim 8, ~~one or more of claims 8 to 10~~, characterized in that the halogenating agent used comprises organic O-Hal compounds and halogens X₂ in a molar ratio of from 0.5:1 to 1:1.

14. (Currently amended) The process as claimed in claim 11, ~~one or more of claims 8 to 10~~, characterized in that a stoichiometric ratio of the halogenating agents as claimed in claim 11 ~~claims 11 to 13~~, based on the content of active halogen, to the compounds (9) and (10), ~~(9), (10)~~,

~~(11), (12), (13), (14), (15) or (16)~~ of 2:1 is used.

15. (Currently amended) The process as claimed in claim 11, ~~one or more of claims 8 to 10~~, characterized in that a stoichiometric ratio of the halogenating agents as claimed in claim 11, ~~claims 11 to 13~~, based on the content of active halogen, to the compounds (9) and (10), ~~(9), (10), (11), (12), (13), (14), (15) or (16)~~, of from 3:1 to 1000:1 is used.

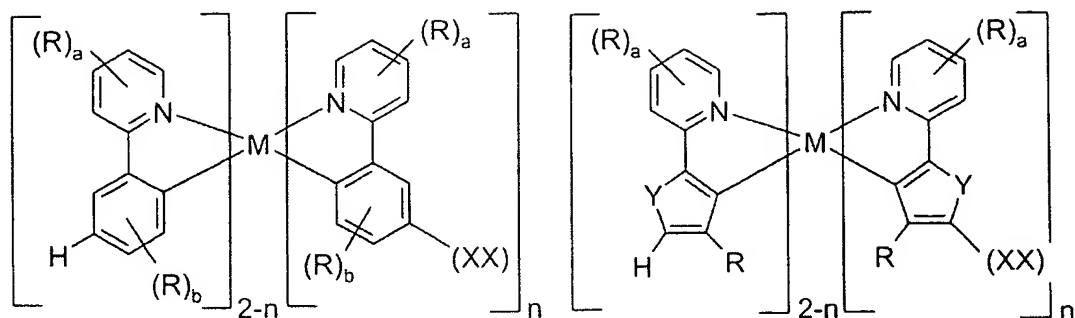
16. (Currently amended) The process as claimed in claim 11, ~~one or more of claims 8 to 15~~, characterized in that a reducing agent is added to the reaction mixture in a molar ratio of from 1:1 to 10 000:1 based on the compounds (9) and (10), ~~(9), (10), (11), (12), (13), (14), (15) or (16)~~, and the addition is effected simultaneously with the addition of the halogenating agents (I), (II) or (III), or after a time delay.

17. (Currently amended) The process as claimed in claim 11, ~~one or more of claims 8 to 16~~, characterized in that the reducing agent used is hydrazine (hydrate) or salts thereof, hydroxylamine or salts thereof, hydroxylamine-O-sulfonic acid and hydroquinones, alkali metal and alkaline earth metal sulfites, alkali metal and alkaline earth metal dithionites, alkali metals and alkaline earth metals and their amalgams and other corresponding alloys, transition metals such as manganese, iron, nickel and zinc, and transition metal alloys.

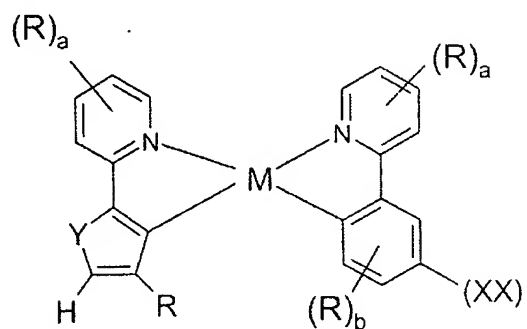
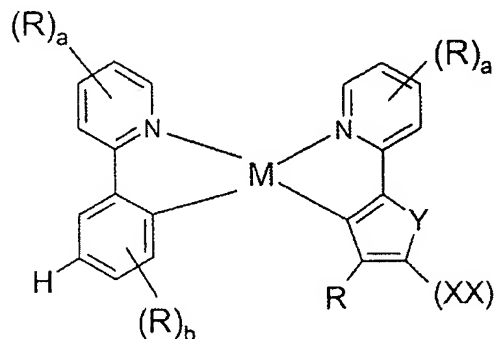
18. (Currently amended) The process as claimed in claim 11, ~~one or more of claims 8 to 15~~, characterized in that the reduction may also be effected by dry-heating, under reduced pressure, the palladium(IV) or platinum(VI) compounds which have been formed as intermediates and isolated in substance.

19. (Currently amended) A compound as claimed in claim 1, ~~one or more of claims 1 to 4~~, characterized in that its purity (determined by means of ¹H NMR or HPLC) is more than 99%.

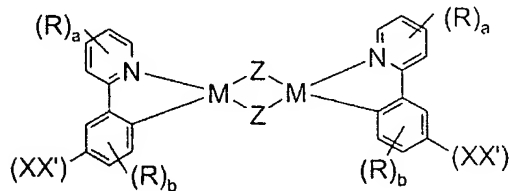
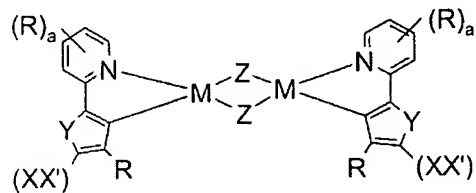
20. (Currently amended) A conjugated or semiconjugated or nonconjugated polymer containing one or more compounds of the formula (1') and/or (2')

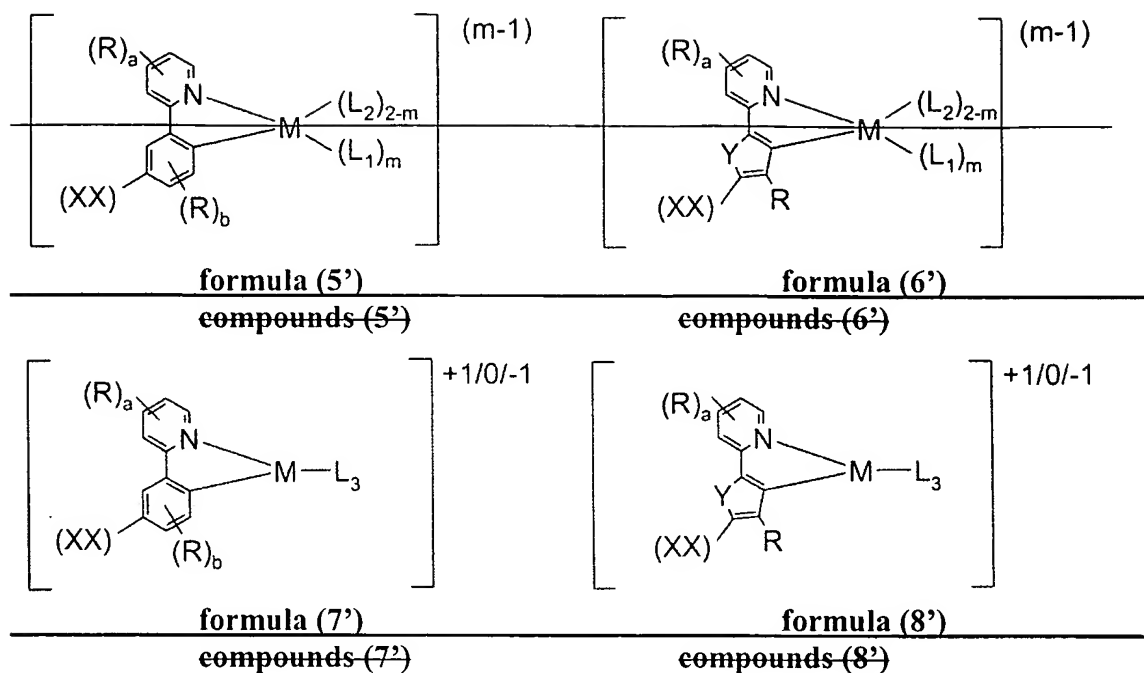
**formula (1')****compounds (1a')****formula (2')****compounds (2a')**

and/or of the formula (1a') and/or (2a')

**formula (1a')****compounds (1a')****formula (2a')****compounds (2a')**

and/or of the formula (3'), (4'), (5'), (6'), (7') and/or (8')

**formula (3')****compounds (3')****formula (4')****compounds (4')**



where the symbols and indices are each defined as follows:

M is Pd or Pt;

Y is O, S, Se or NR¹;

M— is Pd, Pt;

Y— is O, S, Se, NR¹;

R is the same or different at each instance and is H, F, Cl, Br, I, NO₂, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or more nonadjacent CH₂ groups may be replaced by -O-, -SiR¹₂-, -S-, -NR¹- or -CONR¹- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R¹ are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

L_1 is an uncharged, monodentate ligand;

L_2 is a monoanionic, monodentate ligand;

L_3 is an uncharged or mono- or dianionic bidentate ligand;

a is 0, 1, 2, 3 or 4;

b is 0, 1, 2 or 3;

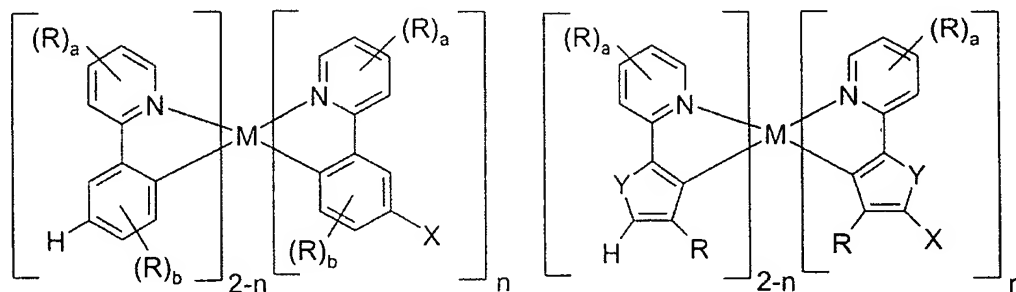
m is 0, 1 or 2;

n is 1 or 2;

(XX) is a bond to the conjugated or semiconjugated or nonconjugated polymer;

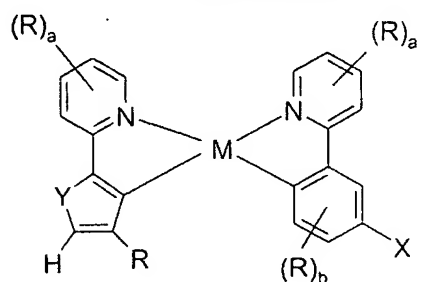
(XX') is H or a bond to the conjugated or semiconjugated or nonconjugated polymer, but at least one (XX') per formula is a bond to the conjugated or semiconjugated or nonconjugated polymer.

21. (Currently amended) A polymer as claimed in claim 20, characterized in that it has been obtained using one or more compounds of the formula (1), (1a), (2), (2a) and/or (3) to (8)

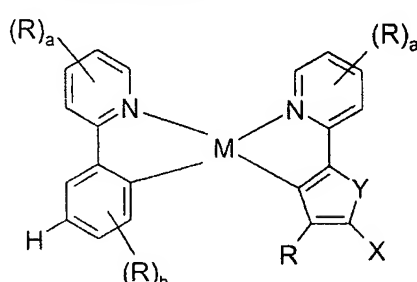


formula (1)

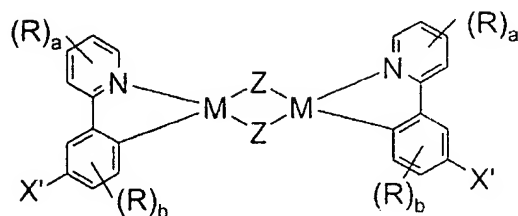
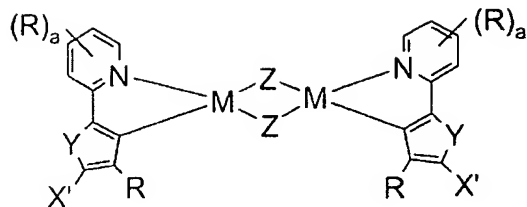
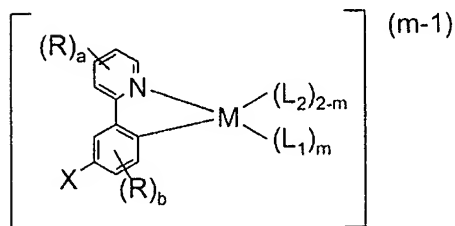
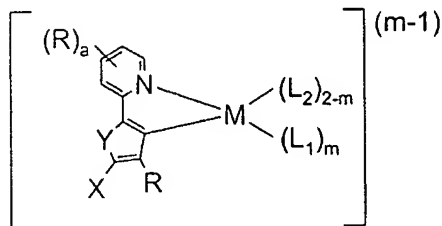
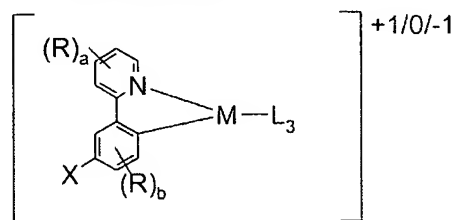
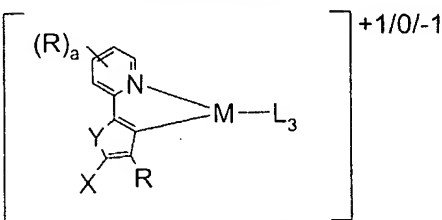
formula (2)



formula (1a)



formula (2a)

**formula (3)****formula (4)****formula (5)****formula (6)****formula (7)****formula (8)**

where the symbols and indices are each defined as follows:

M is Pd or Pt;

X is Cl, Br or I;

Y is O, S, Se or NR¹;

R is the same or different at each instance and is H, F, Cl, Br, I, NO₂, CN, a straight-chain or branched or cyclic alkyl or alkoxy group having 1 to 20 carbon atoms, in which one or

more nonadjacent CH₂ groups may be replaced by -O-, -SiR¹₂-, -S-, -NR¹- or -CONR¹- and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group having from 4 to 14 carbon atoms which may be substituted by one or more nonaromatic R radicals, and a plurality of R substituents, either on the same ring or on the two different rings, may together in turn form one further aliphatic or aromatic, mono- or polycyclic ring system;

R¹ are the same or different at each instance and are each H or an aliphatic or aromatic hydrocarbon radical having from 1 to 20 carbon atoms;

L₁ is an uncharged, monodentate ligand;

L₂ is a monoanionic, monodentate ligand;

L₃ is an uncharged or mono- or dianionic bidentate ligand;

X' is H, Cl, Br or I, with the proviso that at least one X' per formula is selected from Cl, Br or I;

Z is identically F, Cl, Br, I, O-R¹, S-R¹ or N(R¹)₂;

a is 0, 1, 2, 3 or 4;

b is 0, 1, 2 or 3;

m is 0, 1 or 2 and

n is 1 or 2

~~defined in claims 1 to 4.~~

22. (Currently amended) A polymer as claimed in claim 20, ~~claims 20 and/or 21,~~ characterized in that the polymer contains repeat units taken from polyfluorenes, polyspirobifluorenes, poly-para-phenylenes, polycarbazoles or polythiophenes.

23. (Currently amended) A polymer as claimed in claim 20, ~~one or more of claims 20 to 22,~~

characterized in that the polymer is a homo- or copolymer.

24. (Currently amended) A polymer as claimed in claim 20, ~~one or more of claims 20 to 23~~, characterized in that the polymer is soluble in organic solvents.

25. (Currently amended) An electronic component comprising at least one compound as claimed in claim 1 ~~one or more of claims 1 to 4~~.

26. (Currently amended) An electronic component comprising at least one polymer as claimed in claim 20 ~~one or more of claims 20 to 24~~.

27 cancelled

28. (New) An electronic component as claimed in claim 25, characterized in that it comprises organic or polymeric light-emitting diodes (OLEDs or PLEDs), organic integrated circuits (O-ICs), organic field-effect transistors (OFETs), organic thin-film transistors (OTFTs), organic solar cells (O-SCs) or else organic laser diodes (O-lasers).